

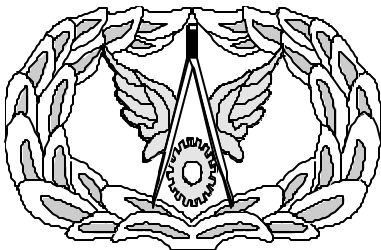
DEPARTMENT OF THE AIR FORCE
Headquarters US Air Force
Washington DC 20330-5000

CFETP 32EX
Parts I, II and III
July 1998

Civil Engineer Officer



MASTER



BASIC



SENIOR

CAREER FIELD EDUCATION AND TRAINING PLAN

For: _____

TABLE OF CONTENTS

Terms and Abbreviations	4
Preface	5
Part I - Career Development	7
Section A - General Information	7
Purpose	
Uses	
Coordination and Approval	
Career Field Manager	
Section B - Specialty Description and Career Progression	9
Specialty Description	
Career Progression	
Civil Engineer Occupational Badge	
Air Force Personnel Center-CE Officer Assignments	
Part II - Tasks, Education and Training	22
Section A - Typical Flight Tasks.....	22
Engineering Flight	
Environmental Flight	
Readiness Flight	
Operations Flight	
Resources Flight	
Explosive Ordnance Disposal (EOD) Flight	
Housing Flight	
Fire Protection Flight	
Section B - Education and Training	27
Formal Education and Training Courses	
Section C - Other Professional Training and Education	28
Professional Military Education	
Graduate Education	
Contingency Training	
Professional Continuing Education	
Acquisition Courses	

TABLE OF CONTENTS (con't)

Section D – Competitive Sourcing and Privatization	30
Competitive Sourcing	
Privatization	
Example	
Part III – Leadership and Supervision	32
Introduction	
Supervising Officers	
Supervising Enlisted	
Supervising Civilians	
Supervisory Training Program	
Awards and Decorations	

OPR: HQ AFCESA/CEOT

Certified By: HQ AFCESA/CEO
Pages: 35/Distribution: F

TERMS AND ABBREVIATIONS

Air Force Institute of Technology (AFIT). Located at Wright Patterson AFB OH, AFIT is the Air Force's institute for professional continuing education (PCE), as well as management of resident and Civilian Institution (CI) graduate programs.

Air University (AU). Located at Maxwell AFB AL, AU is the Air Force's resident home for professional military education (PME) as well as Officer Training School (OTS). In-resident programs include: Squadron Officer School (SOS), Air Command and Staff College (ACSC), the Air Force's Intermediate Service School (ISS), and Air War College (AWC), the Air Force's Senior Service School (SSS).

Career Field Education and Training Plan (CFETP). A comprehensive, multipurpose document that covers all education and training requirements for a specific career field. It provides a logical plan which identifies career field progression, education and training and assists in defending training budgets.

Distance Education. Distance education is on the cutting edge of teaching mediums and takes advantage of delivery methods such as satellite broadcasts, computer based instruction, on-site courses and seminars to deliver course information. Many AFIT courses are now offered this way.

Education and Training Review Committee (ETRC). The ETRC is the corporate body responsible for reviewing all CE education and training programs (including graduate education) for relevancy and ability to meet the needs of the career field. The ETRC structure consists of four committees, including: Engineering; Environmental; Graduate Education, and Training.

Extension Course Institute (ECI). Located at Gunter AFS AL, ECI is an extension of AU and is the clearinghouse for all paper-based PME programs as well as testing materials. These include correspondence and seminar programs for most PME programs like SOS, ACSC, and AWC.

Program Review Committee (PRC). The PRC is the civil engineer corporate body, chaired by AF/ILE, responsible for reviewing all recommendations of the ETRC and approving the best course of action for meeting all education and training needs of the career field. The PRC meets annually, following conclusion of the ETRC, to approve the next fiscal year's program.

PREFACE

1. The civil engineer (CE) officer is required to meet and support Air Force needs during peace and war. This Career Field Education and Training Plan (CFETP) identifies desired training, education, and experience for civil engineer (CE) officers to progress from entry level officer to squadron commander. Beyond that, senior leaders of our career field will emerge based on the experience and knowledge gained during this foundational part of their career. The CFETP provides a description of time-phased education and training recommended for CE officers for successful careers.

2. This CFETP consists of three parts. It should be used by officers, commanders, and supervisors to plan and manage all education and training needs, and guide the officer through a recommended path of experience.

Part I describes overall management and career development opportunities.

Section A explains what the CFETP is and how it should be used.

Section B contains specialty description and career progression information relevant to the civil engineer career field.

Part II shows options available to meet an officer's education and training needs.

Section A shows typical tasks performed at base level and higher for those flights where most officers will work throughout their careers.

Section B shows numerous training and education courses available to assist with development in the civil engineer career field.

Section C discusses other training opportunities, such as continuing education, professional military education, and other professional development opportunities.

Part III describes the role of leadership and supervision. This section includes information on supervising officers, enlisted members and civilians; the feedback process; as well as awards and decorations.

3. The guidance provided in this CFETP, along with the guidance of your supervisors and commanders, should help ensure officers receive the right education, training, and experience at the appropriate points in their careers. The education and training process, as well as this plan, are designed to ensure we train today's work force for tomorrow's challenges. *This document is a dynamic tool and does not include every available course relevant to the civil engineer career field.* Each duty location will provide unique opportunities for career enhancement through local education and training avenues, and those opportunities should be fully exploited.

4. For additional information on officer professional development and career progression, see Air Force Instruction (AFI) 36-2611, Officer Professional Development (OPD), and Air Force Pamphlet (AFPAM) 36-2630, Officer Professional Development Guide (OPDG). These documents are also available on the Air Force Electronic Publications Library (AFEPL) and are the governing documents on Officer Professional Development. If information in this CFETP differs from that contained in these documents, the OPD and OPDG take precedence.

5. Your suggestions for improving this CFETP are welcome and highly encouraged. Please send your recommended changes to the Civil Engineer Career Field Manager (CFM) at the address below. You can also send suggestions through the AFCESA homepage located at **<http://www.afcesa.af.mil>**. Access the Training Division Page once you're on-line and send your comments in care of the CE career field manager.

CE Officer Career Field Manager
HQ AFCESA/CEOT
139 Barnes Drive Suite 1
Tyndall AFB FL 32403-5319

PART I

CAREER DEVELOPMENT

Section A - General Information

“It is essential that you develop your career game plan and realize that it’s yours and your responsibility to keep current. Ask advice from others as you develop it and then let your bosses know what your aspirations are so that they can help you attain your career objectives.”

MGen Clifton D. Wright, former Director of Engineering and Services, HQ USAF

1. Purpose of the Career Field Education and Training Plan (CFETP).

1.1. This CFETP provides information for the civil engineer occupational series, 32EX. This plan outlines desired training, education, and experience to chart and execute a career in the civil engineer business--from entry level officer through squadron commander. The CFETP also provides officers, supervisors, and commanders a means to jointly plan and program training and education opportunities, as well as discuss current and future career opportunities. This plan also:

Identifies professional and military training and education opportunities and recommends the appropriate points/positions in an individual's career to obtain the training and education.

Identifies training and education sources and delivery method(s).

Provides information about supervisory, senior management, and leadership training and development.

2. Uses. This plan is primarily used by officers, supervisors, and commanders. It is also used by major command (MAJCOM) functional managers (MFMs) to ensure comprehensive and cohesive training programs are available for each individual in the Air Force Specialty (AFS). The career progression guidelines outlined in this plan apply to the total force, including Air Force Reserve and Air National Guard officers.

Each officer should use this plan to work with supervisors and commanders to determine appropriate levels and timing of education and training, and ensure they have every opportunity to attend identified courses. Every officer should take the initiative to determine realistic milestones for achieving their goals. Completion of education, training, and experience is a joint responsibility between the officer, their supervisor, and commander.

MAJCOM training personnel and Air Force Institute of Technology (AFIT) education personnel, develop/revise formal resident, non-resident, field, and exportable training based partially on this plan. MFMs ensure their training programs complement the Air Force-level training listed in this CFETP. Identified requirements can be satisfied through a number of avenues including: job experience, resident training, contract training, exportable courses, or distance learning. MAJCOMs and units may supplement this plan with additional training requirements at any time.

3. Coordination and Approval. HQ AFCESA is the coordinating agency for this document. Approval authority is the Air Force Civil Engineer, HQ USAF/ILE. MAJCOM representatives, AETC training personnel, AFIT faculty, HQ AFCEE, and HQ AFCESA training personnel identify and coordinate on career field training requirements. HQ AFCESA/CEOT will review this document annually with MAJCOM subject matter experts to ensure currency and eliminate duplicate training.

4. Career Field Manager (CFM). The CFM for the 32EX career field is assigned to the Training Division, Operations Directorate, Headquarters Air Force Civil Engineer Support Agency. You can contact the CFM at the address below. The phone numbers are DSN 523-6376, commercial (850)283-6376, or toll free 1(888)AFCESA1, ext 3-6376. This Officer CFETP as well as other training tools can be accessed on AFCESA's Training Division home page at <http://www.afcesa.af.mil/products/training>.

CE Officer Career Field Manager
HQ AFCESA/CEOT
139 Barnes Drive Suite 1
Tyndall AFB FL 32403-5319

Section B - Specialty Description and Career Progression

5. Specialty Description. Air Force Manual (AFMAN) 36-2105, Atch 7, describes the 32EX civil engineer officer Air Force Specialty (AFS). It is the guiding document for all Air Force officer classification issues and takes precedence over this CFETP for any classification issues. HQ AFPC/DPPAC is the OPR for AFMAN 36-2105 as well as all classification issues. This document is accessible on the Air Force Electronic Publications Library (AFEPL). The following excerpt reflects the most current information for the civil engineer career field, as updated and approved at the Jan 97 CE Officer Utilization & Training Workshop (U&TW). It has been republished here for your reference and information. One point of note is on **shredouts** -- these are nothing more than character identifiers for certain specialty qualifications required for particular positions within an organization.

CIVIL ENGINEER CAREER FIELD (32E)

The civil engineer (CE) career area provides combat engineering support for deployed Air Force units and weapons systems, emergency repair of war damage to air bases, base denial activities, and other related combat support functions; develops, monitors, and briefs survivability actions and methods to recover capabilities after attack; organizes, trains, and equips contingency forces for nuclear, biological, chemical, and conventional attack operations and other emergency situations. The career area also encompasses activities relating to acquisition, maintenance, operation, and disposal of real property facilities, and includes planning, program formulation and execution, policy development, inspection, command, and direction of CE activities. Included are supervisory, operational, and engineering responsibilities for construction, maintenance, and repair of Air Force real property; operation of utility systems; fire prevention, protection, and aircraft crash rescue; disaster preparedness; and explosive ordnance disposal. Functions involved are planning and programming for maintenance, repair, and construction requirements; design and preparation of plans and specifications for contracts, contract inspection and budgetary development and planning; establishing standards and requirements, and funds management for personnel, supplies, and equipment; environmental protection and base procedures for the construction and maintenance of environmental improvements; planning, budgeting, construction, maintenance, and management of military family housing; acquisition, utilization, and disposal of real estate under Air Force jurisdiction; and the training and use of CE professional and technical personnel.

Officers performing civil engineering functions not requiring a specific engineering discipline are identified by AFSC 32E3G/1G. Readiness non-engineer positions and personnel are identified by AFSC 32E3D/1D. Readiness engineer positions and personnel are identified by AFSC 32E3B/1B. Non-engineer EOD positions and personnel are identified by AFSC 32E3K/1K. Engineer EOD positions and personnel are identified by AFSC 32E3H/1H. For award of a shredout other than B, D, H, K, or G, the mandatory degree must be in the academic area specified in the suffix.

Civil engineer officers will be upgraded based on two years of duty in CE regardless of shredout, except shredouts D and K. Upgrading will be in the shredout relating to their academic discipline or suffix G - General Engineer, dependent upon duty position. Officers whose academic area is not compatible with

shredouts A, C, E, F, or J will be upgraded in suffix G only. Officers of all shredouts may be assigned to positions requiring the suffix G.

Staff AFSC 32E4
Qualified AFSC 32E3
Entry AFSC 32E1

CIVIL ENGINEER

5.1. Specialty Summary. Develops and implements civil engineer (CE) force employment and provides staff supervision and technical advice. Performs and manages CE functions and activities to provide facilities and infrastructure supporting the United States and allies. Activities include programming, budgeting, project management, drafting, surveying, planning, feasibility studies, construction management, utilities operations, energy and environmental programs, land management, real property accounting, fire protection, explosive ordnance disposal (EOD), disaster preparedness (DP) programs, family housing and dorm management, and mobilization programs at base level; and serves on response teams and related installation support services. Advises commanders and government officials on effective use of CE resources. Related DOD Occupational Group: 4A.

5.2. Duties and Responsibilities.

5.2.1. Supports combat operations and activities. Maintains trained and equipped force capable of responding to worldwide contingencies and military operations other than war. Evaluates capabilities and develops contingency methodologies to accomplish mission objectives. Maintains emergency response force to cope with enemy attacks, major accidents, and natural disasters. Plans, develops, and executes procedures to mitigate the effects, render safe and dispose of conventional, nuclear, chemical biological ordnance and improvised explosive devices. Provides on-scene advice to commander on control and integration of emergency response force. Develops, monitors, and briefs survivability actions and methods to recover capabilities after attack. Organizes, trains, and equips contingency forces for conventional and nuclear, biological, and chemical (NBC) attack operations, and other emergency situations. Also acts as Weapons Recovery Cell Director as a member of the Response Task Force for nuclear accidents.

5.2.2. Determines requirements, establishes plans, provides designs, and directs operations, maintenance, repair, alteration, addition, and construction of facilities and utility systems. Determines personnel and material resource requirements. Plans and establishes land use, and provides environmental stewardship. Directs CE forces in support of customers' requirements and coordinates activities with subordinate and lateral units and functions. Determines proper use of facilities and effective employment of utility systems. Acts as technical representative and engineering consultant for operations and maintenance activities. Coordinates activities with base, local, state, federal, and host country agencies.

5.2.3. Develops CE plans, policies, and guidance. Evaluates impact of legislative action, executive orders, directives, and management decisions. Consults with manpower, organization, and personnel staffs to ensure appropriate use of CE personnel. Coordinates with staff agencies on fiscal and legal matters. Directs training,

business practices, and professional development activities. Serves as CE advisor to commanders. Implements standardization and evaluation, and monitors compliance of programs and policies. Directs and conducts engineering research and feasibility studies and surveys.

5.3. Specialty Qualifications.

5.3.1. Knowledge. Knowledge is mandatory of: contingency engineering, contingency base operations (CBO), explosive ordnance disposal (EOD), and survivability skills, including force bed-down, expedient damage repair, and recovery after attack; methods, sources, and techniques of engineering design, construction, maintenance, operation, and repair of facilities and utility systems; resource acquisition and management; military facilities programming and planning; environmental stewardship; housing management; management of real property; fire prevention, protection, and aircraft crash rescue procedures; engineering research and development; and formulation, coordination, and administration of plans and programs.

5.3.2. Education. Education requirements for entry into AFSCs 32E1X are:

5.3.2.1. 32E1A/B/C/E/F/G/H. Program completion is mandatory of an undergraduate academic specialization in architecture or civil, electrical, general, environmental, construction, architectural, or mechanical engineering discipline resulting in graduation from an institution accredited by the Accreditation Board for Engineering and Technology or the National Architectural Accreditation Board.

5.3.2.2. 32E1D/K. Prior qualification in AFSC 1916/32E4 or 1944/32E3D, 12 months base-level experience, and being in a Disaster Preparedness (DP) or Air Base Operability (ABO) position on 31 Oct 93, or prior qualification in AFSC 4016/21A4 or 4024B/21A3K, 12 months base-level experience, and being in an EOD position on 30 Apr 94 may be substituted for an engineering degree.

NOTE: There is no intent to classify non-engineers into AFSC 32E1D or 32E1K. All classifications for Readiness after 31 Oct 93 and for EOD after 30 Apr 94 will be in AFSC 32E1B or 32E1H, respectively, and will require an engineering degree.

5.3.2.3. 32E1J. Program completion is desirable of an undergraduate academic specialization in environmental engineering. Degree disciplines outlined previously may be substituted.

5.3.3. Training. In addition to education and experience, the following training is mandatory for award of the AFSC indicated:

5.3.3.1. 32E3A/B/C/E/F/G/H/J. Completion of Air Force Institute of Technology (AFIT) course, MGT 101, Introduction to Base Civil Engineer Organization.

NOTE: For Air Reserve Component (ARC) officers, completion of AFIT courses MGT 102, Intro to Base Civil Engineer Organizations for Reserve Forces and MGT 484, Reserve Forces Air Base Combat Engineering.

5.3.3.2. 32E3B. Completion of AFIT course MGT 410, CE Readiness Management Applications, and the AETC Readiness Flight Officer (RFO) course.

5.3.3.3. 32E3H. Completion of the Initial Skills Training course for EOD.

5.3.4. Experience. In addition to education and training, the following experience is mandatory for award of the AFSC indicated:

5.3.4.1. 32E3A/B/C/E/F/H/J. A minimum of 24 months experience in the specialty suffix with at least 12 of the 24 months at base level.

5.3.4.2. 32E3G. A minimum of 24 months in any specialty suffix identified in para 5.3.4.1 or the G suffix will suffice. Experience in the suffixes above may be credited toward the experience requirement for award of the 32E3G shredout. Again, at least 12 of the 24 months must be at base level. The G suffix is reserved for functions which do not require specific degrees like mechanical, electrical or environmental.

5.3.5. Other. A 32E4 normally indicates a position on a staff organization (i.e., MAJCOM, HQ Air Staff, FOA, etc.).

5.4. Specialty Shredouts/Suffixes:

<i>Shredout/Suffix</i>	<i>Portion of AFS to Which Related</i>
A.....	Architect/Architectural Engineer
B.....	Readiness Engineer
C.....	Civil Engineer
D.....	Readiness (Non-Engineer)
E.....	Electrical Engineer
F.....	Mechanical Engineer
G.....	General Engineer
H.....	Explosive Ordnance Disposal Engineer
J.....	Environmental Engineer
K.....	Explosive Ordnance Disposal (Non-Engineer)

6. Career Progression. Air Force Instruction (AFI) 36-2611, Officer Professional Development, and Air Force Pamphlet (AFPAM) 36-2630, Officer Professional Development Guide, discuss career progression for officers. These documents are also available on the Air Force Electronic Publications Library (AFEPL) and are the governing documents for Officer Professional Development. The information contained in this paragraph is considered supplemental information to that contained in these documents. If ever in doubt, these documents remain the guiding documents for career progression information. The following describes career progression within the civil engineer career field.

6.1. Introduction to Officer Progression. CE officers are part of the support officer structure. Career paths in this arena will help you to plan and achieve career goals. There are no definitive, concrete steps that

need to be attained to reach rank or position; however, certain jobs or experiences will help you in achieving your goals. It's important to remember: *"the most important job to your professional development is the one you hold today."*

6.2. Civil Engineer Career Path. The first step in charting any career plan is to define your goals, both long and short term. History has shown that one key to success is defining clear goals, both personal and professional. Future civil engineer leaders will be those who achieve depth and breadth through job experience, education and training, and professional development. A solid foundation in these areas will pay high dividends in your future. Failure to build your foundation at the appropriate time may, in effect, close certain doors for advancement later in your career. In other words, your development as a future Air Force leader begins now.

6.2.1. Initial Assignment(s). When initially assigned as a civil engineer, you are expected to build depth through technical experiences with increasing complexity, span of control, and responsibility. Your first assignment(s) are where you should focus on polishing your technical expertise, either on the boards or construction projects in engineering, managing programs in the environmental flight, or leading the readiness flight. As a result of past Air Force restructuring efforts, civil engineering squadrons were reorganized into the objective squadron, with eight flights. Currently, officers may expect to perform in any of the six flights described below if assigned to a base level squadron, or in one of several **RED HORSE** squadrons around the world.

6.2.1.1. The **Engineering** flight provides cradle-to-grave responsibility for all operations and maintenance projects by contract, Simplified Acquisition of Base Engineer Requirements (SABER) projects and oversight of Military Construction Projects (MCP). Lieutenants or young Captains will normally work in this flight as design engineers/project managers with limited supervisory responsibilities. Some opportunities may exist for senior Captains as flight chiefs, or design element chiefs, depending on local circumstances. Officers in this flight perform all base comprehensive planning, project programming, technical design, and construction surveillance for projects to maintain, restore, and upgrade base facilities and infrastructure systems. Part II, Section A, shows typical tasks associated with this flight.

6.2.1.2. The **Environmental** flight is responsible for overseeing cleanup of hazardous waste sites, (commonly referred to as Installation Restoration Program (IRP) sites), assisting the installation commander to oversee compliance with environmental laws, administering pollution prevention programs, conducting planning in accordance with the National Environmental Policy Act, and developing and managing programs for the protection of natural and cultural resources. Again, you can normally expect to work in this flight as a Lieutenant or young Captain as a program manager with limited supervisory responsibilities. Part II, Section A, shows typical tasks associated with this flight.

6.2.1.3. The **Readiness** flight is the focal point for all contingency support and prepares the wing for operations during natural disasters, major accidents, war, and other base emergencies. Officers in this flight provide planning, program management, and training for integrated wing readiness plans, wing disaster preparedness plans, and civil engineer readiness. Lieutenants or young Captains will normally be assigned as the Readiness Flight Chief. In this capacity, you can expect some level of supervisory responsibility including

management of the local Prime BEEF program. Part II, Section A, shows typical tasks performed in this flight.

6.2.1.4. The ***Operations*** flight operates, maintains, repairs, and constructs installation real property with an in-house military and civilian work force. The operations flight provides the squadron's core capability and recovery or sustainability of bases for the projection of aerospace power. Included under the operations flight is the Maintenance Engineering Element. Normally, young Majors/Major (selects) are assigned as the Operations Flight Commander and senior Lieutenants or young Captains could be assigned as the Chief of Maintenance Engineering (this is no longer required to be a military position). Both positions require supervisory responsibility. Part II, Section A, shows typical tasks associated with this flight.

6.2.1.5. The ***Resources*** flight is responsible for the development, preparation, submittal, and maintenance of the financial plan, budget estimates, and the base civil engineer (BCE) financial management system. This flight also serves as the BCE's focal point on all issues relating to manpower and personnel; Automated Civil Engineer System (ACES); and real property reporting and accountability. While there are no officer authorizations designated for this flight, officers assigned here should develop the resource management fundamentals necessary for their use in future leadership positions. Part II, Section A, shows typical tasks performed in this flight.

6.2.1.6. The ***Explosive Ordnance Disposal (EOD)*** flight provides the capability for the detection, identification, field evaluation, rendering-safe, recovery, and final disposal of conventional, nuclear, chemical, and biological unexploded ordnance (UXO), foreign and domestic. Flights are involved in range clearance operations, aircraft emergencies, and worldwide contingency support. This flight is involved in planning, implementing, and executing Force Protection (FP) measures to protect against the effects of any explosive item encountered. Provides support to US Secret Service and Department of State to include protection of Very Important Persons (VIPs). This flight provides assistance to local, state, and federal agencies in situations involving military explosives and situations beyond the capabilities of those agencies. Personnel assigned to this flight also conduct base populace training on ordnance recognition, hazards, and precautions. *There are limited opportunities to serve in this flight as the flight chief, as few bases have EOD flights large enough to be led by an officer.* Those officers selected for EOD positions must attend specialized training before assuming these duties. Part II, Section A, shows typical tasks performed in this flight.

6.2.1.7. The ***Housing*** and ***Fire Protection*** flights are also part of the objective squadron, but officers are not typically assigned to these flights.

6.2.1.8 RED HORSE squadrons offer the ultimate experience for developing technical expertise in both design and construction. These squadrons provide the Air Force with a highly mobile civil engineering response force to support contingency and special operations around the world. They are self-sufficient, 404 person mobile squadrons capable of rapid response and independent operations in remote, high-threat environments worldwide. They provide heavy repair capability and construction support when requirements exceed normal base civil engineer capabilities and where Army engineer support is not readily available. They possess weapons, vehicle/equipment and vehicle maintenance, food service, supply and medical equipment capabilities as well as engineering, operations and logistics support capabilities. Their major wartime responsibilities are to provide a highly mobile, rapidly deployable, civil engineering response force that is self-

sufficient to perform heavy damage repair required for recovery of critical Air Force facilities and utility systems, and aircraft launch and recovery. In addition, they accomplish engineer support for beddown of weapons systems required to initiate and sustain operations in an austere bare base environment, including remote hostile locations. RED HORSE units participate regularly in Joint Chiefs of Staff and MAJCOM exercises, military operations other than war, and humanitarian civic action programs. Finally, they also perform troop training projects which assist base construction efforts while at the same time honing their wartime skills.

6.2.2. Job Experience. Job experience includes building depth through technical expertise early in your career, like design engineer or project/program manager, progressing to jobs that provide breadth of experience, like flight chief/commander positions, and finally achieving leadership positions. Figure 6.2.1 identifies various levels of experience and windows of opportunity to help build your depth and breadth. Although certainly not all inclusive, it's intended to show that a balance of base-level and staff experience, coupled with opportunities for career broadening, will build a strong foundation for civil engineer officers.

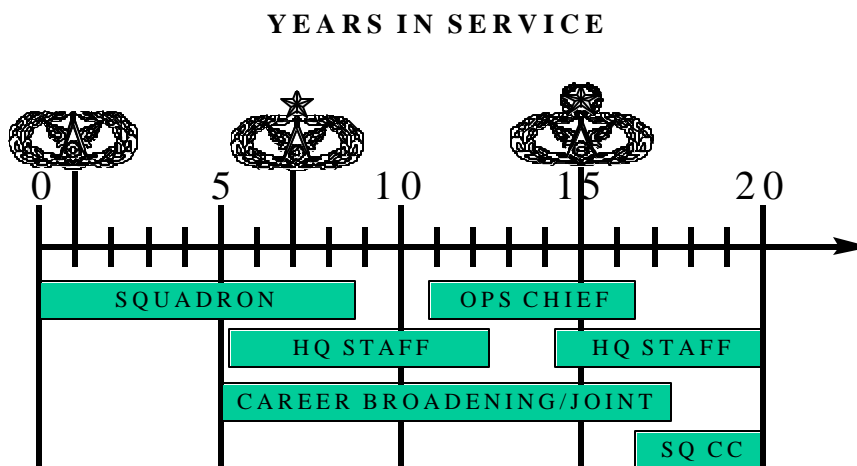


Figure 6.2.1, Typical Civil Engineer Career Path

6.2.2.1. Squadron Level. During the initial part of your career, you will be building the foundation you'll need throughout your career. To experience these opportunities in sufficient breadth and depth, a minimum of two, and sometimes three, permanent change of station (PCS) moves are normally required. Breadth and depth is also gained by managing a larger or different flight or element. When contemplating such a move, keep the following in mind:

- A balanced approach to job experience--if you spent the past several years assigned to an engineering flight, then seek opportunities in another part of the organization.

- An overseas tour--*approximately 23 percent of civil engineer billets worldwide are overseas*. Short tour overseas assignments offer prime opportunities to quickly fill gaps in your professional development and to hone skills in a typically austere environment.
- Experience in several different major commands will give you a broader view of the total Air Force mission and a deeper understanding of how all the "pieces" fit together.

6.2.2.2. Headquarters Staff. After spending time at squadron level, staff billets provide an opportunity to develop both the "big picture" view of the mission and a chance to hone your decision-making skills. Increased job responsibility is key in developing areas of expertise that will enhance your leadership skills. Staff positions in the CE career field include, but are not limited to Air Staff, MAJCOM, AFCESA, AFCEE, or Numbered Air Forces.

6.2.2.3. Career Broadening Assignments. There are limited staff positions you can choose outside the civil engineer career field for career broadening. Typical opportunities include AFIT, ROTC, Basic Military Training, OTS, SOS, Recruiting Service, or the Air Force Academy. Additional career broadening opportunities may be found in AFI 36-2611, Chapter 9, and are also advertised on the AFPC Electronic Bulletin Board. Although each person's career is unique, many civil engineers have branched outside the "traditional" civil engineer path and gone on to successful careers as senior leaders. Career broadening assignments may not be right for everyone, but they should not hold you back either from pursuing other interests. In fact, many of these are great opportunities to expand your "big picture" view of the Air Force. Normally, you should look to accomplish a career broadening assignment shortly after pinning on captain or soon thereafter.

6.2.2.4. Joint Staff. It's often been said that in order to progress to the flag ranks, joint assignments are a must. Although not specifically required for civil engineer officers, joint staff billets provide an opportunity to work with other DOD component services as well as other allied forces. Joint billets require a stringent screening process and are also advertised on the electronic bulletin board at AFPC. AFPC manages all joint staff assignments and currently there are 29 different positions for civil engineer officers worldwide. Most positions are for majors (17 positions) and lieutenant colonels (11 positions) with one position slotted for a colonel. You'll have the opportunity to learn more about joint operations and duties when you take Air Command and Staff College, or an equivalent Intermediate Service School. As was demonstrated in Desert Shield/Storm, the future of military operations will rely heavily on a clear understanding of joint operations.

6.2.2.5. Leadership Opportunities. Opportunity for leadership exists throughout your career, whether as the OIC of a deployed force, operations flight commander, maintenance engineering element chief, squadron commander, etc. Success in a tough leadership role demonstrates attributes desired for command at increasingly higher levels. Again, the foundation you build early in your career prepares you well for any leadership role. Don't turn down an opportunity to show you're ready for increased responsibility.

6.2.3. Professional Development. Professional development continues throughout your career. Figure 6.2.2 identifies typical opportunities you should pursue and approximate timelines for enhancing your performance as an officer and engineer. Such things as professional registration (to include engineer-in-

training) as well as PME are shown in figure 6.2.2. Understand, this is not an all inclusive list. There are other aspects to, and opportunities for professional development and officership, make sure you search them out.

6.2.3.1. Professional Military Education (PME). PME is vital to professional development. All officers need to complete Squadron Officer School (SOS), preferably in-residence, as soon as they are eligible. Intermediate Service School (ISS) and Senior Service School (SSS) are also essential courses at the appropriate times. About 17 percent of those officers selected for major will attend ISS in-residence; the remaining officers should complete ISS by seminar or correspondence as soon as eligible. Selection for SSS in-residence occurs following the lieutenant colonel and colonel promotion selection boards. About 12 percent of each year group will attend SSS in-residence between selection for lieutenant colonel and their 23d year of service. Details on PME are contained in Part II, Section C, of this CFETP.

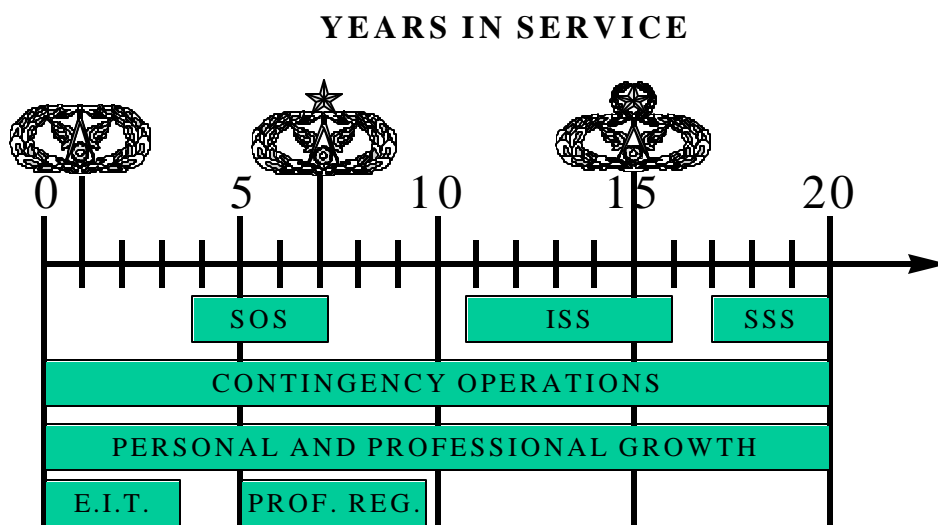


Figure 6.2.2, Civil Engineer Professional Development

6.2.3.2. Contingency Experience. Contingency operations provide officers a unique opportunity to sharpen their technical and leadership skills. Officers should continually seek out opportunities to participate and lead contingency operations. Refer to AFPC's Web Site for further information regarding deployment sites and positions.

6.2.3.3. Personal and Professional Growth. Personal and professional growth include a balance between the following areas: family, fitness, professional readings, communication skills, professional associations, and community involvement. This balance will shift throughout your career as you routinely reevaluate your goals.

6.2.3.4. Professional Registration. Professional registration is a significant step in the professional growth of civil engineer officers. Individual CE officers may choose to pursue professional registration at their own expense. Although currently it's not mandatory for civil engineer officers to become registered, there are certain assignments where professional registration is highly desired. Professional Registration is rapidly gaining significance for military engineers and has been discussed as an important indicator at future squadron commander boards. There are numerous agencies and professional societies which have professional registration materials, including video tape courses and study manuals. Many are now accessible via the internet, like (the American Society of Civil Engineers at www.asce.org; the American Society of Mechanical Engineers at www.asme.org; or the National Society of Professional Engineers at www.nspe.org) to name a few. Many MAJCOMs also have excellent video tape programs for their engineers and architects. Check with your local or MAJCOM training manager for further information. Normally, four years of professional work experience and successful completion of the Fundamentals in Engineering exam are required prior to taking the PE exam. Check with your local state licensing board for exact details on their specific requirements for licensure.

6.2.4. Education and Training. Like professional development, education and training continues throughout your career, whether it be technical or managerial. Figure 6.2.3 shows both mandatory and desired education and training opportunities, as well as timing for obtaining this education and training.

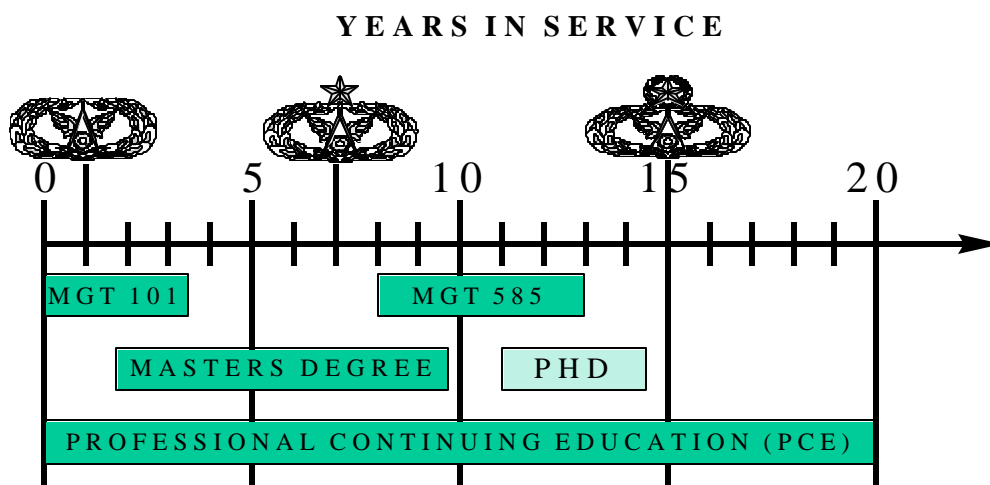


Figure 6.2.3, Education and Training Opportunities

6.2.4.1. Required Education. As a civil engineer officer, you are required to attend MGT 101, Introduction to the Base Civil Engineer Organization, within six months of entering active duty. As a senior captain or major, you're also required to attend MGT 585, Contingency Engineer Command Course.

AFIT's Civil Engineer and Services School (CESS) offers both of these courses. Full descriptions of these courses can be found in the latest edition of AFIT's catalog on their homepage at www.afit.af.mil.

6.2.4.2. Graduate Education. An appropriate graduate degree early in your career will enhance your job performance and your value to the Air Force. AFIT offers qualified officers opportunities to pursue Air Force sponsored advanced degrees in many different disciplines. Also, your local base education center offers opportunities for advanced degrees through a variety of off-duty education programs using Air Force tuition assistance programs (often up to 75% reimbursement of course costs). Although many engineers pursue advanced degrees in engineering fields, many also pursue advanced degrees in other areas such as business, aeronautical science/management, human resources management, etc. The choice of degree is up to each individual officer, but the need for graduate education stays the same. In order to be competitive for promotion, an advanced degree should be high on your list of career priorities. Officers may also pursue doctorate level degrees; however, there are a very limited number of positions available requiring these degrees, other than as faculty members at AFIT or the Air Force Academy.

6.2.4.3. Professional Continuing Education (PCE). PCE also enhances your technical and managerial skills by keeping you current in your job. PCE courses can be obtained through Air Force resident courses, colleges or universities, or commercial training organizations. AF/ILEOO and AFCESA/CEOT manage the PCE program for civil engineering. Work with your unit training manager for details on required courses.

6.2.4.4. CE Career Pyramid. The discussion above does not intend to suggest there is only one ideal path to follow through your career. However, the path to the top normally includes a strong technical base, staff assignments, and command positions. Figure 6.2.4 illustrates windows of opportunity for a typical career path from entry level officer to squadron commander. Included are various levels of assignments, education, and PME opportunities available at different phases of your career. Beyond that, senior leaders of our career field will emerge based on the experience and knowledge gained during this foundational part of their career. The idea behind a successful career is to begin by building your *primary job proficiency* through a strong technical foundation. Follow that up by *building depth* through increased leadership opportunities. Finally, after building depth you should focus on *building breadth* by expanding your possibilities at different levels.

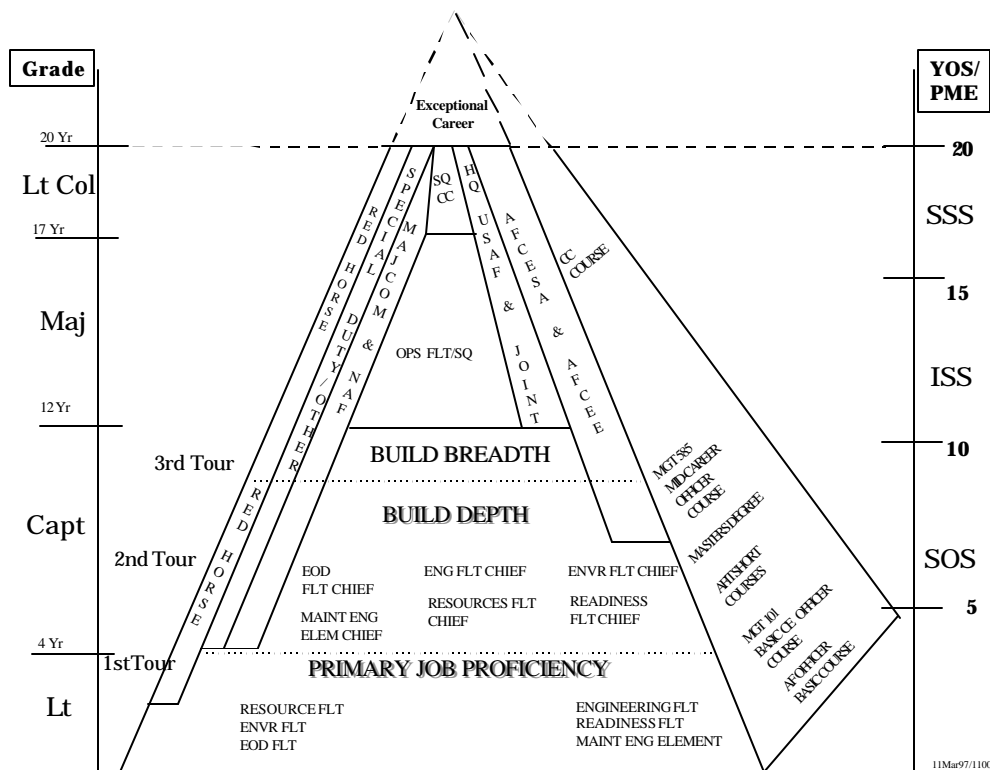


Figure 6.2.4, Civil Engineer Career Pyramid

7. CE Occupational Badges. The civil engineer badge reflects a great history and tradition. By wearing it, you will be recognized by your fellow airmen as having achieved an expected level of competence. The multitude of engineers before you established this expectation through excellent service in both peace and war. Eligibility criteria for award and wear of AF occupational badges can be found in AFI 36-2923.

7.1. CE Badge Heraldry. The gear wheel and compass have historically been used to represent the engineering profession, in both the military and private sector. The gear represents the essence of engineering: applying scientific principles and technology to practical ends. To Air Force engineers, the gear symbolizes an element (representing the built environment) that meshes with other environments (weapon systems and trained personnel) to enable the Air Force to perform its mission. The compass is a precision tool historically used by engineers in designing and constructing facilities and equipment. The gear and compass together symbolize all the diverse specialties within the Air Force civil engineer career field. Finally, the wings help to portray the fundamental linkage between engineering and aviation and that the built environment is the foundation supporting Air Force missions and people.

7.1.1. Basic Badge. The basic badge is awarded upon successful entry into the career field and completion of MGT 101, Introduction to the Base Civil Engineer Organization.

7.1.2. Senior Badge. The senior badge adds a star to the top of the badge. This is awarded after an officer has served a minimum of seven years in any civil engineer AFS.

7.1.3. Master Badge. The master badge indicates the final step in the occupational series and adds a wreath around the star. It's awarded to officers who have successfully completed the MGT 585, Contingency Engineer Command course and have a minimum of 15 years in any civil engineer AFS. **Note:** Completion of MGT 585 has been mandated by the Air Force Civil Engineer as a requirement for award of the master badge. This is a functional requirement only and is in addition to AFI 36-2923 requirements.

7.2. Other Badges. The EOD occupational badge is authorized to those individuals who complete the formal training requirements of the Naval School of Explosive Ordnance Disposal (NAVSCOLEOD). The same requirements for award of the senior and master badges apply to the EOD badge as well. Award of the basic badge is given after successful completion of NAVSCOLEOD. For more information on the wear and award of all badges, refer to AFI 36-2923.

8. Air Force Personnel Center-Civil Engineer Officer Assignments. CE officer assignments are worked by the career assignment personnel at HQ AFPC/DPASB. Officers may look for assignment opportunities through the electronic bulletin board (EBB) or on the AFPC home page at <http://www.afpc.af.mil>. The CE officer assignments staff can also be reached at DSN 487-3451/3452.

PART II

TASKS, EDUCATION, AND TRAINING

Section A - Typical Flight Tasks

1. Task Lists. The following common tasks are indicative of the types of functions normally encountered within a typical civil engineer squadron (although officers are not typically assigned to the Housing and Fire Protection Flights, they do routinely interface with each flight; therefore, these flights have been included in Section A). The flights shown below correlate with the flights as described in Part I, Section B, para 6.2.1, of this CFETP. These tasks may vary depending on your squadron and base.

1.1. Engineering Flight: Planning, programming, design, and construction.

- Planning: Develop and monitor a strategy for supporting mission requirements, preserving quality of life, and fostering an effective working relationship with the surrounding community.
 - Develop and maintain land use plans.
 - Monitor air installation compatible use zone study.
 - Maintain base and housing comprehensive plans.
 - Facilitate a base-wide forum for prioritization of requirements.
 - Recommend project siting.
- Programming: Identify, define, validate, and advocate maintenance, repair, and construction requirements.
 - Define scope and cost of work and determine work classification.
 - Prepare project documentation and obtain project approval.
 - Determine appropriate funding avenues and prepare supporting documents.
 - Update project management databases.
- Design: Develop technical drawings and specifications for project execution.
 - Determine method of design (in-house versus contract).
 - Refine scope of work and cost estimate.
 - Completion of in-house designs and oversight of contracted designs.
 - Update project management databases.
 - Conduct comprehensive design reviews.
 - Perform activities associated with contract award.
- Construction: Execution of project design from contract award to financial close-out.
 - Conduct pre-construction conference.
 - Inspect materials and workmanship.
 - Facilitate work through effective coordination with base agencies.
 - Monitor and document project status.

1.2. Environmental Flight: Restoration, pollution prevention, compliance, and conservation.

- Restoration: Identify site contamination, determine relative risk, and clean-up as necessary.
 - Consolidates all known and suspected contamination sites and prioritizes sites based on risk.
 - Manage site closure rates.
 - Analysis and selection of best available technologies to meet restoration requirements.
 - Coordinate with community and regulatory agencies.
 - Provide project management of studies and restoration contracts.
- Pollution Prevention: Eliminate/reduce pollution.
 - Manage the Reuse, Recovery, and Recycling Program (RRRP).
 - Survey, track, and reduce the use of hazardous materials and the generation of pollutants.
- Compliance: Comply with all local, state, and federal legal and regulatory requirements.
 - Prepare and maintain required permits and plans.
 - Implement projects and actions to comply with requirements.
 - Implement and maintain required training programs.
- Conservation: Preserve natural and cultural resources, and evaluate impact of proposed military actions on the environment.
- Other general management tasks:
 - Develop, implement, and maintain management plans and training programs.
 - Perform environmental audits.
 - Track regulatory violations and corrective actions.
 - Establish an environmental funding program to identify and advocate for environmental funding and track and report expenditures.
 - Update database for environmental programming, budgeting, and execution (A-106).
 - Organize and conduct Environmental Protection Committee (EPC) and other committee meetings.
 - Establish and maintain an effective public relations program.

1.3. Readiness Flight: Prepares engineers for wartime and contingency missions. Trains base populace in nuclear, biological, and chemical (NBC) defense and peacetime disaster response.

- CE contingency training:
 - Beddown of weapon systems and personnel.
 - Base recovery after attack (BRAAT).
 - Miscellaneous training such as field sanitation, self-aid buddy care, security, and weapons.
- Manages War Reserve Material (WRM), mobility gear, training equipment, and weapons.

- Prepares and coordinates actions to support contingency operations.
 - Accomplishes actions to deploy civil engineers.
 - Base Recovery Plan.
 - Host nation support agreements.
 - Develops checklists/procedures.
 - Installation Contingency Response Plan
 - Base Support Plans
- Manages wing/base CBO & Disaster Preparedness Program.
 - NBC training.
 - Camouflage, Concealment, & Deception (CCD).
 - Peacetime disaster and major accident response.
 - Interface with local emergency agencies.
 - Operates CE Damage Control Center during contingency operations/exercises

1.4. Operations Flight: Operation, maintenance, repair, and capital improvement of base facilities and infrastructure.

- Real Property Maintenance: Responsible for maintaining facilities and base infrastructure to include:
 - Electrical systems.
 - Airfield lighting systems.
 - Aircraft arresting systems.
 - Natural gas distribution systems.
 - Liquid fuel systems.
 - Alarm and control systems.
 - Sewage collection systems.
 - Fire protection systems.
 - Water distribution systems.
 - Storm water systems.
 - Pavement systems.
 - Heating and cooling systems.
 - Corrosion control systems, to include cathodic protection systems.
 - Lightning protection and grounding systems.
- Plant operations: Operates central heat/chiller plants, water and wastewater treatment facilities, and electrical power plants.
- Capital improvements: Responsible for minor modifications and construction to support mission requirements and improvements to quality of life.
- Real property services: Provides in-house and contract services, and management of misc service contracts.

- Custodial.
 - Grounds maintenance.
 - Refuse collection.
 - Protective coatings.
 - Snow removal.
 - Pest management.
 - Misc Service Contracts include things like: Waste Oil disposal; small pump/motor repair; elevator maintenance; recurring maintenance services; and carpet installation
- Maintenance Engineering: Responsible for the technical expertise to support the operations and maintenance of base facilities and infrastructure to include:
 - Infrastructure maintenance and repair plans.
 - Review design projects for reliability and maintainability.
 - Perform work analysis.
 - Manage service contracts and Quality Assurance Evaluator (QAE) program.
 - Provide non-design drafting support.
 - Manage the Recurring Work Program (RWP).
 - Manage the energy conservation and utilities program.
 - Resource Management: Responsible for the management of manpower, funds, vehicles, and materials to perform real property maintenance, capital improvements, service contracts, and technical support.
 - Customer Service: Responsible for production control, management of the BCE work order program, including the work order review board, as well as work scheduling.

1.5. Resources Flight: Real property, unit funds, information management, and manpower.

- Ensures land, facilities, and utilities owned or leased are properly classified, tracked, managed, and effectively used.
 - Assists with space utilization.
 - Monitors and maintains real property records.
 - Manages CE input to support agreements.
- Advises the commander on financial plans, budget execution, and analysis of cost and productivity reports.
 - Develops squadron financial plan.
 - Prioritizes budget requirements.
 - Advocates for funding and monitors funds availability by funding category.
 - Tracks reimbursement requirements.
 - Interprets financial reports and conducts productivity analysis.
- Operates and oversees information management systems.
 - Advises and assists squadron personnel on computer operations.

- Manages computer hardware and software programs and local area network.
- Oversees unit manning document (UMD) and assists with manpower management.
 - Maintains, interprets, and ensures UMD reflects accurate data.
 - Review and develop position descriptions.

1.6. EOD Flight: Provides explosive ordnance disposal support and training in peace and wartime.

- Render safe and dispose of foreign and domestic explosive devices:
 - Conventional, chemical/biological, nuclear, munitions incidents/accidents.
 - Improvised explosive devices (IED).
 - In-flight/ground aircraft emergencies.
 - Aircraft crashes--bombing and gunnery, test and evaluation, and verification ranges.
 - Range clearance operations
- Supports other agencies:
 - Very Important Person (VIP) support.
 - Federal Agency Assistance.
 - US Intelligence Community.
 - Civilian Authority Assistance.
 - Training to base agencies.
 - Other service EOD units.

1.7. Housing Flight: Manages accompanied and unaccompanied housing.

- Military Family Housing:
 - Assigns, terminates, and inspects military family housing units.
 - Monitors military family housing maintenance contracts.
 - Provides housing referral service.
 - Manage housing waiting list.
- Dormitory Management:
 - Assigns/terminates rooms.
 - Track occupancy rates.
 - Budget for furnishings requirements.
 - Manage waiting lists.
 - Develops dormitory upgrade plan.

1.8. Fire Protection Flight: Provides base fire protection services.

- Aircraft crash and rescue response.
- Structural fire response.

- Fire prevention, training, and community awareness.
- Hazardous material response.
- Initial On-Scene Commander Representative for disaster response.

NOTE: The base civil engineer leads, manages, and integrates all flights to best support mission requirements. Base civil engineers also act as the base fire marshal.

Section B - Education and Training

2. Formal Education and Training Courses. The following courses are the minimum recommended for the positions indicated. Local requirements will often present unique opportunities depending on your squadron's organization, and you should attempt to take courses at the earliest opportunity possible. Refer to the latest edition of AFIT's Civil Engineer and Services School catalog, AFIT's Graduate School of Engineering catalog, and AFCAT 36-2223 for a complete list of current courses, content, and eligibility criteria. Other courses and prerequisites can be found in CEHNDP 350-1-1, the US Army Corps of Engineers "Purple Book," as well as the Department of the Navy's "Joint NAVCONSTRACEN Course Catalog." The USAF Extension Course Institute Catalog and Price Listing also provides an excellent source of additional courses and information. Contact your unit or MAJCOM training manager for more information.

2.1. New CE Officer (Any Flight).

- MGT 101, Introduction to the Base Civil Engineer Organization (required within six months of initial assignment).
- Depending on your degree, suffix and duty position, focus on those ENG, ENV, and MGT courses designed for your particular specialty or duty position. These courses should be taken at the earliest opportunity to obtain a higher level of technical competence. Many of the courses shown below fall into this category, and by taking them at your earliest opportunity, you'll better prepare yourself for future leadership positions.

2.2. Senior Captains (with Over Eight Years of Commissioned Service) and Majors.

- MGT 585, Contingency Engineer Command Course (required for award of the master badge, as mandated by the Air Force Civil Engineer).

2.3. Readiness Flight Chief.

- MGT 410, Readiness Management Applications Course.
- Readiness Flight Officer (RFO) Course at Fort Leonard Wood MO. (FY99)

2.4. EOD Flight Chief.

- MGT 433, EOD Management Applications.
- Basic EOD School (Badge awarding course).
- Advanced Nuclear Course.
- Advanced Management Course.
- Advanced Access and Disablement.

2.5. SABER Element Chief.

- MGT 426, SABER Management.

2.6. Environmental Flight Chief (*normally a civilian position, often requires professional registration*).

- ENV 416, Environmental Management Applications.
- Other ENV courses as appropriate.

2.7. Resources Flight Chief (*normally a civilian position*).

- MGT 411, Resources Management Applications.
- Other Financial management courses as appropriate

2.8. Engineering Flight Chief (*normally a civilian position requiring professional registration*).

- MGT 420, Engineering Management Applications.
- Other ENG courses as appropriate

2.9. Operations Flight Commander.

- MGT 430, Operations Management Applications.

2.10. Base Civil Engineer.

- MGT 400, Civil Engineer Commander/Deputy.
- MLMDC 813, Air Force On-Scene Commander's Course (optional); contact AU/CLD.
- ENV 400, Commanders Environmental Management.
- J5OZD13B4001, Senior Officers Nuclear Accident Course (AFCAT 36-2223).
- X5OZD14N3, Introduction to Information Warfare (AFCAT 36-2223).
- AMC CEMC Contingency Environmental Management Course (AFCAT 36-2223).

Section C - Other Professional Training and Education

3. Professional Military Education (PME). PME provides your educational exposure to the Profession of Arms and is a prerequisite for advancement to the senior ranks. The base education office can provide more complete information on criteria and enrollment procedures. The latest edition of AFCAT 36-2223 provides valuable information on all programs. Normally, commanders are notified when nominations are due, and your organization should advertise the opportunity to apply. PME in residence is centrally funded and subject to AF-wide competition. The three levels of PME are:

3.1. Squadron Officer School (SOS).

Curriculum: Instruction in leadership, officership, force employment, and communications skills (letter writing and preparing and delivering briefings), problem-solving, and teamwork.

Residence: Seven weeks temporary duty (TDY) at Air University, Maxwell Air Force Base, Montgomery AL.

Correspondence: Refer to the latest edition of AFCAT 36-2223 for criteria.

In-residence Criteria: Officers with more than four but less than seven years Total Air Force Commissioned Service (TAFCS) who are not in a failed or deferred promotion status.

3.2. Intermediate Service School (ISS).

Curriculum: A number of schools are available, but Air Command and Staff College (ACSC) is most commonly attended by Air Force people; contact your base training office for a list of other schools. The ACSC program includes warfighting at the operational level, doctrine, jointness, the profession of arms, and analytical and practical tools needed for leadership in the application of air and space power.

Residence: Forty weeks at Maxwell AFB.

Correspondence/Seminar: Refer to the latest edition of AFCAT 36-2223 for criteria.

In-residence Criteria: Major or major-select with less than 15 years TAFCS as of 1 Jan of graduation year and be selected by an annual selection board at AFPC.

3.3. Senior Service School (SSS).

Curriculum: A number of schools are available, but Air Force engineers commonly attend the Industrial College of the Air Force (ICAF) or Air War College (AWC); contact your base training office for a list of other schools. The AWC program primarily focuses on warfighting, the application of aerospace power in joint or combined operations, evaluation of national security and military strategy formulation, defense resource allocation and management, trends and sources of conflict in the international system, and the execution of strategy in a multipolar world. The ICAF curriculum is more engineer-oriented.

Residence: Ten months at Maxwell AFB for AWC; 10 months at Ft McNair, Washington DC, for ICAF.

Correspondence/Seminar: Refer to the latest edition of AFCAT 36-2223 for criteria.

In-residence Criteria: Lt Col or Lt Col-select.

4. Graduate Education. The optimal graduate education program for civil engineering officers is one which provides you with the concepts, skills, and techniques needed to manage people, resources, and programs. The Air Force offers competitive programs to fund graduate degree studies through the Air Force Institute of Technology for highly motivated individuals. The Graduate Engineering and Environmental Management (GEEM) master of science degree in AFIT's Graduate School of Engineering is specifically designed to meet the needs of the civil engineering career field. In addition, consult the base education office for information on tuition assistance and other programs to support graduate studies at your location. Refer to Part I, paragraph 6.2.4.2 of this CFETP for more details.

5. Contingency Training. Various types of contingency training exists for civil engineering officers. Local exercises make up a significant element of this training. Also, the final week of MGT 101 gives new officers a taste of actual field training. If you get stationed at a base with a mobility mission, you'll eventually get to experience additional training at one of the three Silver Flag sites through deployments with your Prime BEEF team. The Air Force Civil Engineer Support Agency has also developed a series of Air Force Qualification

Training Packages (AFQTPs) which were designed to give you a better understanding of the operation and maintenance of critical wartime equipment items. These multi-media based packages are available in CD-ROM and should be available through your squadron training office. In addition to these opportunities, Readiness Challenge, the premier contingency training competition for civil engineers, is held every two years at Silver Flag. This competition pits the Air Force's elite civil engineer, services, chaplain, and public affairs teams against one another for a full week of contingency events. Finally, other locations like the AMC Warfare Center offer further contingency training opportunities.

6. Professional Continuing Education (PCE). Refer to the most current edition of AFIT's Civil Engineer and Services School (CESS) catalog for the latest PCE offerings. AF/DPPE is the Air Force OPR for Education and Training including oversight of PCE. In 1997 PCE was tied to the Air Force Training/Education CONOPS implementation to better link AF corporate resources to requirements through the Program Objective Memorandum (POM) cycle. The OPRs for oversight of engineering and management courses are AF/ILEOO and AFCESA/CEOT. Each MAJCOM training manager conducts annual screening and validation for their respective commands and forwards requirements to AFCESA/CEOT for consolidation. Other opportunities also exist locally through seminars, workshops, and classes. Contact your unit or MAJCOM training manager for more information.

6.1. Distance Education Programs. In addition to resident courses, AFIT's Civil Engineer and Services School serves thousands of students annually through distance education programs. On-site courses, on-site seminars, satellite broadcasts, and videotapes deliver job-related education to the workplace. Refer to the latest edition of the CESS catalog for the most current information on course offerings.

6.2. AFIT's Home Page. You can also visit AFIT's Civil Engineer and Services School page on the Internet at <http://www.afit.af.mil/Schools/CE/tcess1.htm>. The home page gives you the latest information and course offerings from AFIT.

7. Acquisition Courses. Some officers might have the opportunity to work in research and development (R&D) positions at major commands and field operating locations. The Defense Acquisition University offers resident and exportable courses, such as Acquisition 101 and 210, which help prepare officers for working in the acquisition field. Contact your unit or MAJCOM training manager for more information.

Section D – Competitive Sourcing and Privatization

8. Competitive Sourcing and Privatization has moved to the forefront of Air Force civil engineer initiatives. With the future design of military organizations being reengineered, the move to competitively source in-house functions and privatize target business activities has rapidly grown in importance. Future engineers will undoubtedly have to understand the complexities of dealing with these initiatives. HQ USAF/ILEI is the OPR for competitive sourcing and privatization for the Air Force Civil Engineer. HQ AFCESA/CEOC is the lead office at AFCESA for competitive sourcing and privatization initiatives and has extensive information on both initiatives on their web site at www.afcesa.af.mil/AFCESA/Contracts. The

following excerpts were taken from the AFCESA/CEOC web page and give a short definition of each activity:

8.1. Competitive Sourcing. Competitive Sourcing is the determination to source a function(s) (in-house or contract) with the most efficient and cost effective method. The determination process is through competition that includes the private sector or public sector. The process typically used to make this determination is the federally mandated process outlined in the Office of Management and Budget (OMB) Circular A-76, *Performance of Commercial Activities*. The key here is that the government still retains control and responsibility for the function, either through a service contract or in-house performance.

8.2. Privatization. Privatization is the transfer of control of a target business activity and associated assets to a public or private sector entity. It is usually characterized by the shift of responsibility to such an entity for the fundamental, long-term financial investment required to sustain the privatized activity.

8.3. Example. If the Air Force currently controls and operates a sewage treatment plant with in-house personnel, the AF can award a contract to a contractor to operate and maintain the plant (outsourcing) or can divest itself of the plant by transferring ownership to a contractor to treat the sewage generated by the installation (privatization).

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

EUGENE A. LUPIA, Maj Gen, USAF
The Civil Engineer
DCS/Installations & Logistics

PART III

LEADERSHIP AND SUPERVISION

1. Introduction. *Leadership* is an inherent responsibility of every military officer. Over the ages many great military leaders have displayed their unique talents both on and off the battlefields. All great leaders seem to understand and possess certain core values (or principles) which help them navigate through the tough times of leadership. Principles like: honesty, integrity, commitment, enthusiastic energy, humility, faith and vision.

Leadership in the Air Force begins with understanding and living our core values everyday. The Air Force core values of: *Integrity first; Service before self; and Excellence in all we do*, help us to continue being the absolute best at what we do. Former Secretary of the Air Force, Dr. Sheila Widnall, summed up core values like this:

*“Core values make the military what it is; without them, **we cannot succeed**. They are the values that instill confidence, earn lasting respect, and create willing followers. They are the values that anchor resolve in the most difficult situations. They are the values that buttress mental and physical courage when we enter combat. In essence, they are the three pillars of professionalism that provide the foundation for military leadership at every level.”*

One great example of what it takes to be an effective leader can be found in these words, “**BE A LEADER**”:

B BE BETTER than those you have admired and respected; the best way to pay back those who have helped mentor your growth is to be better than even they hoped you would be.

E EXPECT THE UNEXPECTED – You’ve been promoted because of your proven potential to take on more responsibility. This brings with it a lot of unforeseen, unexpected terrain. Be ready to take on whatever comes your way head on; a true leader can afford to get surprised, but he/she can’t afford to let surprise trip him/her up!

A ACCOUNTABILITY – You will fly lead more than ever now, take the heat for your mistakes and those of your team; give your team all the credit you can; always provide top cover for your troops – even when it hurts.

L LEARN/LOVE/LOOK AHEAD – Learn every day – it’s the key to not only continuously improving, but sustaining yourself as the best of the best (which is what those who follow you will expect/hope for). Love your troops and your family – always keep your priorities here in clear focus; never neglect either one. Look Ahead – you must constantly hone your vision for the future; without doing it, you will be blind and worse yet, your troops will be too.

E EXPERT – Never assume you are one, always strive to be one. Be prepared for others to automatically expect you are one by virtue of your rank/position.

A ATTITUDE & ACCUMEN – There is no substitute for a sustained positive, proactive, and professional attitude -- especially when you must lead something you don't particularly agree with. There is also no substitute for looking and acting like an all-pro at all times -- remember, a shiny penny catches the eye before a dull one every time!

D DOER – If you are not leading by doing, by example, then you're not leading. Never ask/task others to do anything you would not do yourself. Always consider this before you levy the task.

E EXCELLENCE is largely a function of mission success and what the people you serve with think about you and your leadership; it's never easy to do well in both arenas consistently, but that's what you must always strive for.

R RESPECT comes with the grade, that which really counts is what you earn!

Supervision is also important to the CE career field and it's incumbent upon you to research the availability of training and information on becoming a supervisor. Your commander, the AFPC home page, and civilian personnel office are good places to start.

- Civilian Personnel Home page (<http://www.afpc.af.mil>).
- Evaluation Programs (<http://www.afpc.af.mil>).
- Officer Evaluation System/Enlisted Evaluation System training Guides (<http://www.afpc.af.mil>).
- AFCESA A-Grams (<http://www.afcesa.af.mil>).

1.1. Mentorship. A fundamental responsibility of leadership is to “grow” the next generation of leaders. As a supervisor, you must mentor and counsel your subordinates, assist them in developing well-defined goals, and ensure they are given realistic feedback. Supervisors should use this plan to help their subordinates obtain a balance of: experience, education and training, and professional development. In addition to providing mentorship, you should actively seek mentorship from your superiors and more experienced peers, enlisted, and civilians.

1.2. Feedback. The officer, enlisted, and civilian promotion systems require formal feedback sessions. Initial feedback to your subordinate establishes your expectations for their performance. Follow on feedback sessions allow you to communicate to the subordinate just how well they are meeting your expectations. Just as importantly, the informal feedback you give your subordinates will enhance communication and help improve job performance.

2. Supervising Officers.

2.1. Commander's Involvement Program (CIP). Commanders have the best insight into an officer's talents, strengths, limitations, and professional development needs. Their responsibilities with respect to the

professional development and assignment of their officers occurs in two phases: Phase I which offers general professional development guidance, and Phase II which relates to specific assignments for which an officer volunteers. Refer to AFI 36-2611, Chapter 8, for a complete explanation of the CIP. This instruction is also available on the AFEPL.

2.2. Officer Evaluation System (OES). AFI 36-2611, Chapter 3, and AFI 36-2402 discuss the OES. These documents include information on the objective of the program, documenting job performance as well as dealing with promotion recommendation forms (PRFs). You can access both instructions on the AFEPL.

2.3. Officer Promotion System (OPS). AFI 36-2611, Chapter 4, describes the purpose and details of the OPS. Detailed information on such things as promotion opportunities, phase points, selection criteria, and selection boards are included. AFI 36-2501 contains additional information on officer promotion as well as selective continuation. You can access both documents on the AFEPL. Talk with your supervisor and commander on the details of the OPS. Promotion board schedules are also available on the AFPC home page.

3. Supervising Enlisted.

3.1. Enlisted Evaluation System (EES). AFI 36-2403 is the governing document for the EES. It includes information on such areas as performance feedback, enlisted performance reports, as well as AF Forms 910 and 911. For more information, you can access AFI 36-2403 on the AFEPL.

3.2. Airman Promotion Program. AFI 36-2502 covers the airman promotion program. It contains information on promotions from Amn through CMSgt. AFI 36-2502 is accessible on the AFEPL.

4. Supervising Civilians. Throughout your career you will be required to supervise civilians. This is a unique leadership opportunity which requires specific knowledge and training. These areas include: union agreements, civilian appraisals, time keeping, etc. You can locate the most current information on the civilian personnel system by contacting the Civilian Personnel Officer at your base. More information is available on the civilian personnel home page at <http://www.afpc.af.mil>.

4.1. Civilian Performance Program. Refer to AFI 36-1001, Managing the Civilian Performance Program, for the latest information on how to manage the civilian performance program. This instruction includes information on such issues as: performance planning and appraisals, incentive awards, monetary incentive awards, time off incentive awards, honorary incentive awards, dealing with performance problems, as well as keeping records. AFI 36-1001 is accessible on the AFEPL.

5. Supervisory Training Program. Initial training for all newly assigned supervisors helps bridge the gap between the skills required at the working level and those required at the supervisory level. Before first-level supervisors assume their new duties, or within six months after assignment to a supervisory position, they will

be provided the initial training described below. (This information was extracted from AFI 36-401, Attachment 4. If this CFETP reflects conflicting information, AFI 36-401, takes precedence.)

5.1. The Air Force Supervisor 's Course. This course is designed to provide first-level supervisors, regardless of organizational component, with leadership and management skills required in supervisory positions. The following courses may be accepted as equivalent training for the Air Force Supervisor's Course:

- a. Management Course I, Part I.
- b. Air Command and Staff College.
- c. Squadron Officers School.

5.2. Civilian Personnel Management Course. This course provides military and civilian first-level supervisors background information and an understanding of applicable personnel laws and regulations. This training is not required for those supervisors who have completed Management Course I, Part II, or the Civilian Personnel Policies, Practices, and Procedures (4-Ps) course.

5.3. Overseas Areas. MAJCOMs and servicing civilian personnel flights in overseas areas develop and present training courses for military and civilian supervisors of local national (LN) employees. Due to the wide diversity in LN personnel programs, no standard Air Force course will be developed.

5.4. Lieutenant's Professional Development Course (LPDC). Some bases may offer courses in Lieutenant's Professional Development. Your Company Grade Officers Council representative should have information on whether your base has an active program or not.

6. Awards and Decorations . One of the most important responsibilities of being a supervisor is to properly recognize and reward your subordinates for exceptional performance. A variety of recognition programs exist to identify outstanding performers. AFD 36-28 covers Awards and Decorations. In particular, AFI 36-2803 contains the latest information on the Air Force Awards and Decorations Program. These guidance documents are both accessible on the AFEPL. Some specific programs are listed below.

6.1. The CE Awards Program. The CE Awards Program is an annual program designed to recognize and reward outstanding performance in a number of different categories. AFI 36-2817 covers the latest information on the CE Awards Program and is accessible on the AFEPL.

6.2. Individual Military Awards and Decorations . AFI 36-2803 is the governing document on the Air Force Awards and Decoration Program. This document is accessible on the AFEPL and contains the latest information on individual awards and decorations.

6.3. Squadron/Wing Recognition Programs . Local recognition programs vary by locations. Contact your first sergeant or squadron section commander for a full listing of recognition programs available.

6.4. Civilian Awards. Civilian awards vary by location as well. Contact your civilian personnel office for local information or AFI 36-1001 for overall guidance on managing the civilian performance program.